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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,789	06/24/2003	Norio Kimura	2003-0865	9516

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EXAMINER

SHAKERI, HADI

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/601,789	KIMURA ET AL.	
	Examiner	Art Unit	
	Hadi Shakeri	3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/897,918.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>06/24/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it should describe the claimed invention, i.e., a polishing apparatus. Correction is required. See MPEP § 608.01(b).
2. The specification should also be amended to indicate the US patent number for the parent application.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

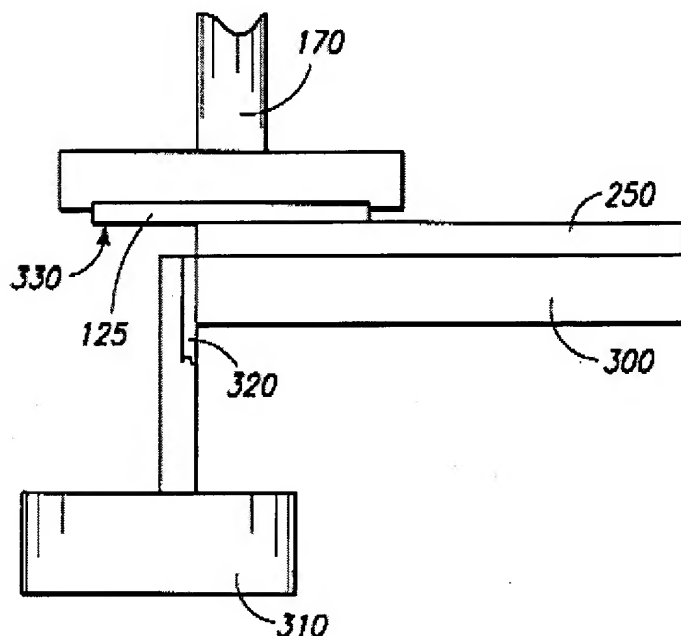
4. Claim 3 is rejected under 35 U.S.C. 102(b) as being anticipated by either Takahashi et al. or Schultz (US 5,672,091 or 5,081,796).

Both Takahashi et al. and Shultz disclose all the limitations of claim 3, i.e., a polishing apparatus comprising a polishing table having a polishing surface; a substrate carrier; and an actuator for altering a force acting on the substrate and the polishing surface. It is noted that in an apparatus claim, the functional, narrative or intended use language not resulting in a structural difference to read over prior art is considered met, i.e., the apparatus is capable of performing the functions.

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5. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Lenkersdorfer (US 6,213,844).

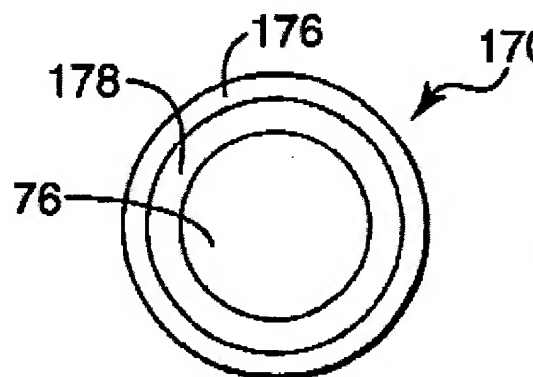
Lenkersdorfer discloses all the limitations of claims 1, 3, 8 and 10, i.e., a polishing apparatus comprising a polishing table (300) having a polishing surface (250), a substrate carrier (170) for holding a substrate and bringing the substrate into contact with the polishing surface, a liquid supply nozzle (slurry nozzle not shown) for supplying polishing liquid while polishing, an actuator for altering the force acting to urge the surface of the substrate against the polishing surface during polishing, and a water supply nozzle (320) for providing water toward said polishing surface (i.e., upward toward the surface) or/and the wafer, see the note regarding functional, narrative and/or intended use language.



Regarding claims 2, 4-7 and 9, Lenkersdorfer meets the limitations.

6. Claims 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Muilenburg et al. (US 6,604,985).

Muilenburg et al. discloses all the limitations of claim 11, i.e., a polishing table having a polishing surface (shown here as 76) and a transparent ring (178) positioned outside and fixedly connected to an outer peripheral edge of the polishing surface, the transparent ring having a flat surface which is flush with the



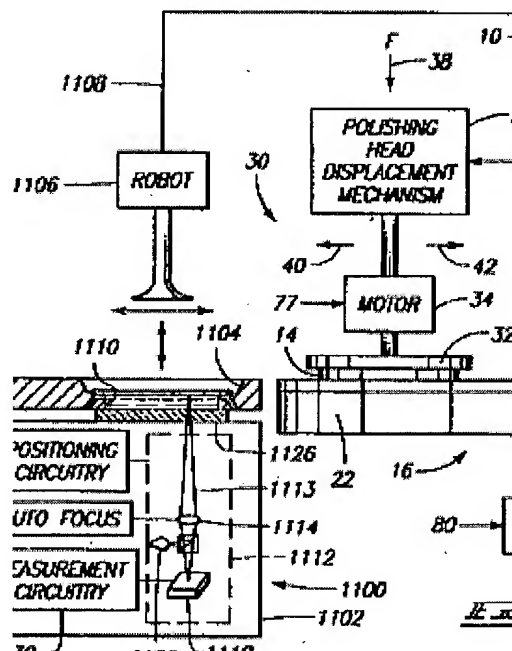
polishing surface of the polishing table.

Regarding claims 12 and 13, Muilenburg et al. meets the limitations, i.e., sensor (50) monitoring the degree of planarization, and wherein the carrier head is capable to move the wafer between the polishing surface (76) and extending partly outwardly from the outer periphery of the surface, e.g., partially over (178).

7. Claims 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Sandhu et al. (US 5,730,642).

Sandhu et al. discloses all the limitations of claim 14, i.e., a polishing table having a polishing surface; and a stationary transparent member positioned outside, spaced away from and adjacent to an outer peripheral edge of the polishing surface, the stationary transparent member (1126) having a flat surface (the upper surface as shown) which is flush with the polishing surface of the polishing table.

Regarding claims 15 and 16, Sandhu et al. meets the limitations, i.e., (1100) and wherein the wafer carrier (1106) is capable to move the wafer between the polishing surface and the transparent member, whether partially or fully.



Conclusion

8. Prior art made of record and not relied upon are considered pertinent to applicant's disclosure. Arai, Cesna, and Shultz et al. are cited to show related inventions.

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9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Hadi Shakeri at (703) 308-6279, FAX (703) 746-3279 for unofficial documents. The examiner can normally be reached on Monday-Thursday, 7:30 AM to 6:00 PM. All official documents may be faxed to (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist at (703) 308-1148.

A handwritten signature in black ink, appearing to read 'Hadi Shakeri', is written over the printed name and title.

Hadi Shakeri
Patent Examiner
March 27, 2004